Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Continental Resources, Inc.
Well Name/Number: Longrass 1-24HSU
Location: NW NE Section 24 T25N R52E
County: Richland **, MT; Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time: 30-40 days drilling time.
Unusually deep drilling (high horsepower rig): No, triple drilling derrick rig (900-1000 HP Estimated) to drill a single lateral horizontal Bakken Formation well, 13,254'MD/8627'TVD.
Possible H2S gas production: Slight
In/near Class I air quality area: No, Class I air quality area.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____
Comments: No special concerns.

Water Quality

(possible concerns)
Salt/oil based mud: Will use freshwater and freshwater mud system on surface hole, oil based invert drilling fluids for the intermediate hole and saltwater (brine) to drill horizontal lateral to TD.
High water table: No high water table anticipated at this location.
Surface drainage leads to live water: No, location is about 1/4 of a mile to the east of an unnamed ephemeral tributary to Grass Creek.
Water well contamination: No, closest water well is a mile north from this location and is 80' in depth. This well will drill surface hole with freshwater to 1000'. Will set steel suface casing and cement to surface from 1000'.
Porous/permeable soils: No, silty sand clay soils.
Class I stream drainage: No

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other: _____.
Comments: 1000' of surface casing cemented to surface adequate to protect freshwater zones and to cover base of Fox Hills formation. Also, fresh water mud systems to be used on surface hole. Drilling fluids will be recycled. Reserve pit completion liquids to be hauled to a commercial Class II disposal. Pit contents will be buried in the lined pit, top soil spread over pit area.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None anticipated.
High erosion potential: not likely -, moderate cut, up to 11.5' and moderate fill, up to 7.4', required.
Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: No 400'X450' location size required.
Damage to improvements: Slight, surface use is culyivated.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
X Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Using existing county roads, 480. An access off the existing county road, #480 will be built into this wellsite, about ½ mile required. Invert drilling fluids will be recycled. Reserve pit completion liquids to be hauled to a commercial Class II disposal. Solids will be buried in the lined pit. No special concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: None nearby..
Possibility of H2S: Slight
Size of rig/length of drilling time: Triple drilling rig 30 to 40 days drilling time.

Mitigation:
_X_Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: No concerns, operational BOP stack and sufficient surface casing should be able to control any problems that occurs.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None, identified.
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: No species other than fish –well site not near water.

Mitigation:
__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other:_____
Comments: Private surface lands. No concerns.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites: None identified
Mitigation
__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other:_____
Comments: Private surface lands. No concerns.

Social/Economic

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: Development well. No concerns

Remarks or Special Concerns for this site

Well is a single lateral horizontal Bakken Formation well,

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected . Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): Thomas Richmond
(title:) Administrator
Date: September 6, 2013

Other Persons Contacted:

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Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Richland County water wells
(subject discussed)
September 6, 2013

(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County
(subject discussed)

_September 6, 2013_____
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____